As manufacturer of safety equipment, the Cobianchi Liftteile AG company is responsible for the design and manufacture of the Cobianchi progressive safety gears (downward, PC100E) and brake devices (upward, PC100U).
In order to make the production, the distribution, and the maintenance of our progressive safety gears and brake devices easier for the manufacturers of the framework and for the installation companies, these operating instructions have been established.

These operating instructions document the PC100D standard version. If your installation type differs from the versions described in these instructions, please contact your technical office or the responsible construction department.

In the following you will find important notes, which if properly observed will contribute to an impeccable installation and operation.

The following drawing has to be enclosed with these operating instructions:

Drawing no.	Brake type	Front view, top view, side view
100D-BA01-1	PC100D	Assembly drawing FV with Pos. no.

These operating instructions consist of some pages of text (number depending on the language) and one drawing. Customer-specific solutions may require deviating installation sequences. The progressive safety gears and the brake devices can be installed at the top of or underneath the cabin, considering the position of the connection shaft. The lifter rope engagement takes place at the draw-in lifter (Pos. 11). The required force to push the main brake shoes (Pos. 13) against the return spring systems (Pos. 19) to the end stop of the housing (Pos. 12) is generated by the feeder cogging of the draw-in lifters (Pos. 11). In the end-position the feeder cogging is no more engaged. For detailed information, please refer to our technical documentation.
The transport locks (Pos. 21, connecting rods between the gusset plates (Pos. 6)) must be removed before installation.

Subject to deviations from the standard versions described here.

To be observed prior to the installation:
The system PC100D consists of an EC-typetested safety gear PC100E (downwards, consist of two adjusted and sealed safety gear heads) and a brake device PC100U (upwards, consist of two adjusted and sealed safety gear heads). All performance specifications on the type plates refer to the use in pairs PC100E/PC100U. The serial numbers are embossed on all safety gear heads. These numbers must correspond to the serial number on the type plates attached and enclosed and must be able to be allocated to the serial number of the installation. If this is not the case, then a mistake has been made and it is necessary to refer back to the purchasing department, your own stores department or directly with the manufacturer.

1. Assembly

1.1. Assembly and alignment of safety gear heads

As a standard, the safety gear heads are supplied in fully assembled condition and adjusted with four gusset plates (Pos. 6). Support plates (Pos. 5), lifter shaft (Pos. 1 and 2), stop-triggering bushing (Pos. 1b) and limit switch (Pos. 9) are mounted to the safety gear rope side.
The gusset plates (Pos. 6) have to be screwed to the frame using a sufficient number of M16 screws. Secure absorption of the torque acting on the frame structure via the gusset plates (Pos. 6) during the brake process must be ensured.
The guide rail must be located just between the gusset plates (Pos. 6), in order to ensure sufficient lateral movability of the housings (Pos. 12) and the bearing shafts (Pos. 4). With the safety gear in engaged condition any contact between the housings (Pos. 12) and the gusset plates (Pos. 6) must be excluded.
The housings (Pos. 12) are secured in a neutral position by means of the pressure springs (Pos. 14). The precise position has to be adjusted using the set collar (Pos. 15) during commissioning. If the screw in the set collar (Pos. 15) is loosened, the release connections (Pos. 16) have to operated in order to ensure that the two draw-in lifters (Pos. 11) contact the rail running surface on both sides. Tighten the screw in the set collar (Pos. 15) in this position.

1.2. Mounting of connection shafts between safety gear heads

The connection shafts are not supplied by Cobianchi Liftteile AG. In the case of *internally positioned connection shafts*, the structural steel tubes cut to suitable length (centre distance 237mm) 20x20x2.5 or 3mm according to DIN 2395-3 have to be connected to the square section release shaft coupler Pos. 8).
If the *connection shafts are positioned at the outside*, the structural steel tubes cut to suitable length (centre distance-382mm) ø50x5mm according to DIN 2391 have to be welded to the flanks provided (Pos. 2a).
After assembly of connection shafts has been completed, check that the linkage can be rotated easily by hand. In particular in the case of internally positioned connection shafts, make sure that no excessive torsion occurs within the shafts. The draw-in lifters (Pos. 11) of the safety gear heads must engage on both guide rails simultaneously. In the case of great centre distances the connection shafts have to be reinforced.

1.3. Assembly of support plates and lifter

If not already preassembled, the support plates (Pos. 5) have to be screwed to the gusset plate (Pos. 6) on the safety gear rope side. Position stop-triggering bushing (Pos. 1b) and insert lifter shaft (Pos. 1 and 2). The roller of the limit switch (Pos. 9) must be positioned in the recess of the triggering bushing (Pos. 1b). Then secure lifter (Pos. 1 and 2) at the draw-in lifter (Pos. 11) and lifter shafts (Pos. 1 and 2) by means of the bolt (Pos. 3). Before tightening the bolts and lock nuts, check that the draw-in lifters (Pos. 11) are in neutral position (safety gear fully open) and the lifter (Pos. 1 and 2) and support plate (Pos. 5) are parallel, when viewed from above. Then tighten all bolts and lock nuts. Now check that the lifters (Pos. 1 and 2) can be moved freely up and down.

1.4. Mounting of safety rope connector to the two lifters

Connect the adjustable safety rope connector (Pos. 7) to the lifters (Pos. 1 and 2) by means of the two pins, insert rubber rings and secure pins by means of splint. With the spring hung in (Pos. 10) the two lifters (Pos. 1 and 2) must pull the draw-in lifters (Pos. 11) in the neutral position (safety gear fully open). For precise adjustment of the safety rope connection (Pos. 7) the connecting bolt has to be loosened slightly. Subsequently, remove the clearance in the elongated holes by pulling the rope end connections to the top and the bottom and tighten connecting bolt. Check manually that the engaging lever system moves smoothly.

1.5. Type plate

Before attaching the enclosed type plate in a clearly visible position of the frame, the intended surface must be cleaned and be completely dry. The adhesive surface of the type plate must not be touched over a large surface. After adhering press firmly.

1.6. Indicating label for oiled rails

Every progressive safety gear or brake device for use with oiled rails is supplied with a green indicating label. This should be attached in a clearly visible position (e.g. on rail oiler).
Recommended oil: HLP oils according to DIN 51524, part 2, or similar oils, viscosity ISO VG 68-150.

2. Connection

Wire limit switch (230 V, 4 A) (Pos. 9) and check function.
Connect safety gear rope with rope end connections of safety rope connector (Pos. 7) at lifter (Pos. 1 and 2).
The release force at the lifter (Pos. 9) required for the safety gear to engage is approximately 200-250N. It must be ensured that the tensile force in the limiter rope generated by the released speed limiter is at least 2 times the force required for the safety gear to engage (however, at least 300N).

3. Commissioning

Note: To be observed prior to the first safety gear test:
In all cases, dirt, rust-protection, and eventual paint coats have to be removed from the guide rail running surfaces. This is made best using cold cleaning agents or brake disk cleaning agents.
In the case of oiled rails the HLP oils recommended according to the green indicating label should be used (DIN 51524, part 2, viscosity ISO VG 68-150).

4. Maintenance

If the progressive safety gears or brake devices have been correctly installed, then the maintenance is limited to the following checks:

4.1. Condition of rails:
according to above commissioning instruction

4.2. Triggering linkage:
Synchronous response of lifters (Pos. 11), connection without any play through connection shaft, free and smooth movement of lifters in the respective direction.

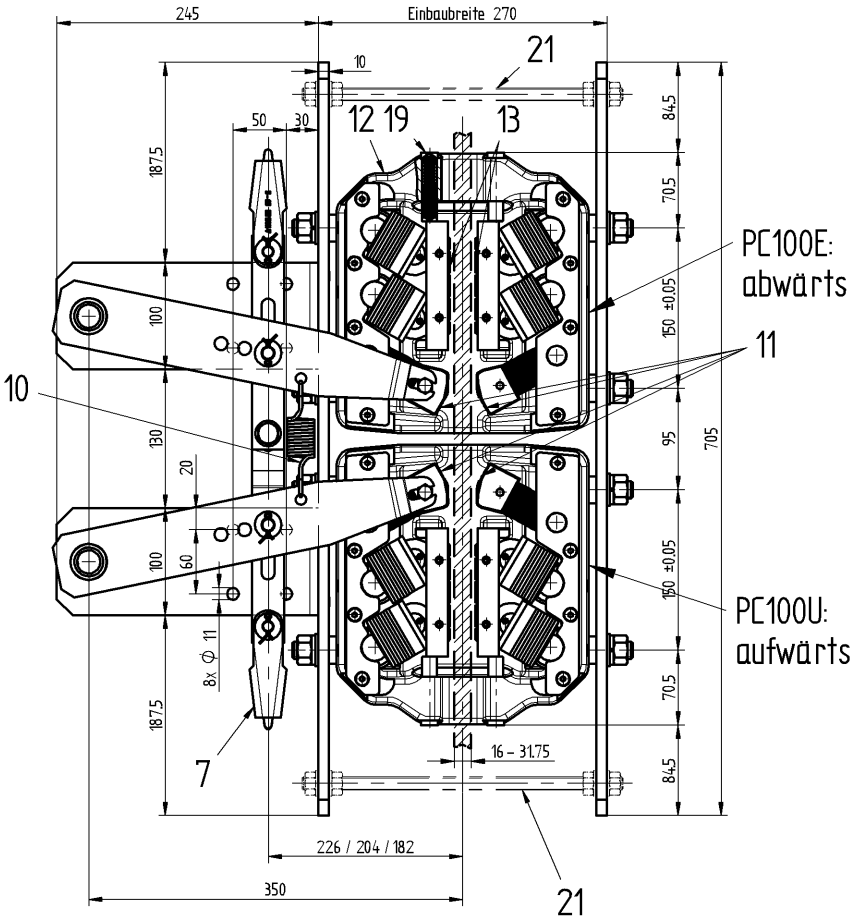
4.3. Limit switch:
Correct electrical/mechanical functioning, actuation ensured

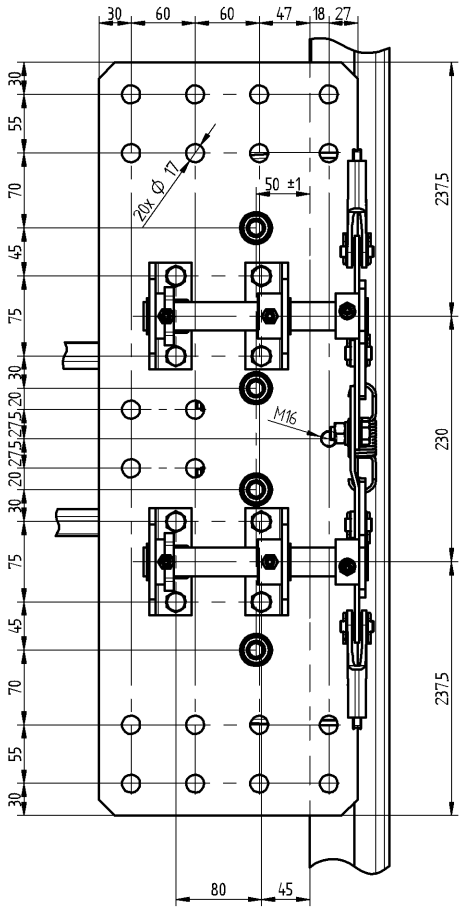
4.4. Safety gear heads:
centred, clean

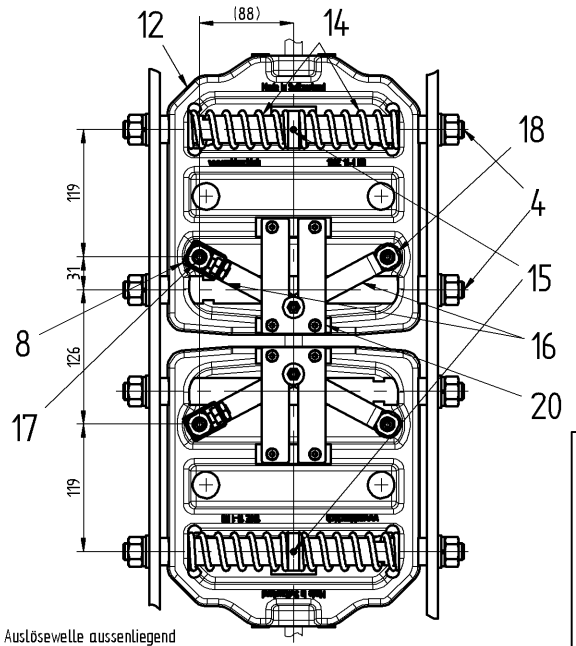
4.5. Guide-ways of cabin:
In an impeccable condition, not widened.

4.6. Cleanliness:
In general and in particular in the case of building construction elevators and conversions of existing installations: make sure that the safety gear heads are protected against contamination with plaster, concrete, cement, mortar, gravel or other materials. Contaminated safety gear heads have to be dismantled and cleaned.

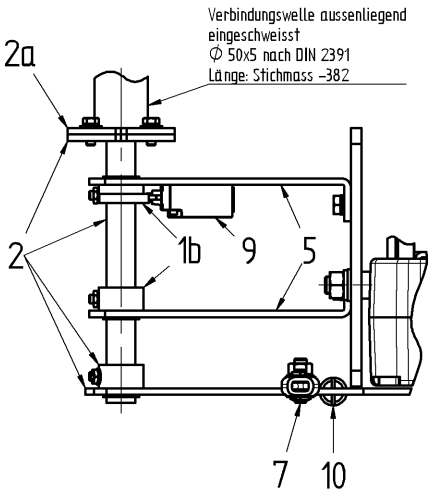
If these simple instructions are followed, then the safety for the users of the elevator as well as for the installation company can be increased significantly.

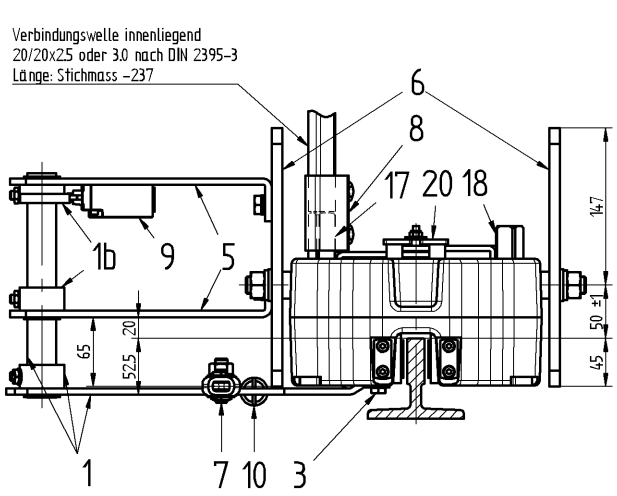






Technische Änderungen vorbehalten





FWA: Auslösewelle aussenliegend
FWI: Auslösewelle innenliegend

Stückzahlen für Gesamtsystem bestehend aus zwei Fangvorrichtungspaaren 14 Fangköpfe)

FWA	FWI	Gegenstand	Pos.	Werkstoff	Modell	Bemerkungen
4	4	Transportsicherung	21	–		–
4	4	Synchronisationseinheit	20	–		–
8	8	Bremsbackenrückstellsystem	19	–		–
4	4	Wellenendstück	18	–	100E-06-2	–
4	4	Auslösewelle	17	–	100E-06-1	–
8	8	Auslöseverbindung	16	–	100E-05-1	–
4	4	Stellring kpl.	15	–	100E-MZ31-2	–
8	8	Druckfeder	14	–	100E-31-1	–
8	8	Bremsbacke	13	–	100E-16-6	–
4	4	Gehäuse	12	–	100E-11-2	–
8	8	Einzugheber	11	–	100E-08-1	–
1	1	Rückzugfeder	10	–	HD20-20-1	–
2	2	Endschalter	9	–	DA-MZ05-2	–
–	2	2 Auslösevierkant kpl.	8	–	DA-MZ03-3	–
1	1	Seilschlossgarnitur kpl.	7	–	100D-MZ30-1	–
1	1	4 Knotenbleche kpl.	6	–	100D-MZ19-1	–
4	2	2 Stützbleche kpl.	5	–	100E-MZ45-1a/b	–
8	8	Aufnahmeachse	4	–	100E-36-1	–
4	2	Schraube	3	–	HL20-03-1	–
2	–	2 Heber FWA kpl. inkl. Heberachse, Anschlag- Auslösehülse kpl. und Flanke 50	2 1b 2a	–	100E-MZ01-2 DA-MZ28-3I DA-12-4I	–
–	2	Heber FWI kpl. inkl. Heberachse und Anschlag- Auslösehülse kpl.	1 1b	–	100E-MZ01-1 DA-MZ28-3I	–

Das Urheberrecht auf dieser Zeichnung und allen Beilagen, die den Empfänger persönlich anvertraut sind, verbleibt jederzeit unserer Firma. Ohne unsere schriftliche Genehmigung darf diese nicht kopiert noch Dritten mitgeteilt werden. Zuwiderhandlungen werden gerichtlich verfolgt.

Änderung: (Datum / Index)

Ausgabe: 01.04.10 / HG

Zusammenstellung

zu Betriebsanleitung

System: PC100D (bestehend aus 1 x PC100E + 1 x PC100U)

Massstab	Gezeichnet	01.04.10	HG
1 : 5	Kontrolliert	01.04.10	HG
–	Geprüft	01.04.10	DH
–	Ersatz für:	–	

Cobianchi Liftteile AG
Sägegasse 5, CH-3110 Münsingen
Tel. ++41 – (0)31 720 50 50
Fax ++41 – (0)31 720 50 51
info@cobianchi.ch – www.cobianchi.ch

Zeichnungsnummer

100D-BA01-1